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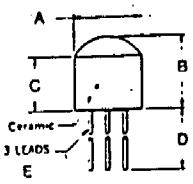
2N4996

HIGH-FREQUENCY TRANSISTORS FOR TUNER AND IF-AMPLIFIER STAGES IN FM AND AM/FM STEREO-MULTIPLEX RECEIVERS

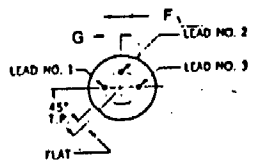
***absolute maximum ratings at 25°C free-air temperature (unless otherwise noted)**

Collector-Base Voltage	30 V
Collector-Emitter Voltage	18 V
Emitter-Base Voltage	4 V
Continuous Collector Current	50 mA
Continuous Device Dissipation at (or below) 25°C Free-Air Temperature	250 mW
Storage Temperature Range	−65°C to 150°C
Lead Temperature 1/16 Inch from Case for 10 Seconds	260°C



electrical characteristics at 25°C free-air temperature (unless otherwise noted)

PARAMETER		TEST CONDITIONS	2N4996 MIN	2N4996 TYP	2N4996 MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10\ \mu A$, $I_E = 0$	30			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 2$ mA, $I_B = 0$,	18			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\ \mu A$, $I_C = 0$	4			V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 15$ V, $I_E = 0$			100	nA
		$V_{CB} = 15$ V, $I_E = 0$; $T_A = 85°C$			10	μA
h_{FE}	Static Forward Current Transfer Ratio	$V_{CE} = 10$ V, $I_C = 2$ mA	50			
$\lvert h_{fe} \rvert$	Small-Signal Common-Emitter Forward Current Transfer Ratio	$V_{CE} = 10$ V, $I_C = 2$ mA, $f = 100$ MHz	6		14	
$\lvert y_{fe} \rvert$	Small-Signal Common-Emitter Forward Transfer Admittance	$V_{CE} = 10$ V, $I_C = 2$ mA, $f = 10$ MHz				mmho
C_{cb}	Collector-Base Capacitance	$V_{CB} = 10$ V, $I_E = 0$, $f = 1$ MHz,	0.1		0.65	pF
r_{oep}	Parallel-Equivalent Common-Emitter Short-Circuit Output Resistance	$V_{CE} = 10$ V, $I_C = 2$ mA, $f = 10$ MHz				kΩ
$r_b'C_c$	Collector-Base Time Constant	$V_{CB} = 10$ V, $I_E = -2$ mA, $f = 79.8$ MHz		14	20	ps



PIN 1 EMITTER
2 BASE
3 COLLECTOR

DIM	INCHES MIN.	TYP.	MAX.
A	.192		.222
B			.240
C	.100		.120
D	.500		
E	.016		.019
F		.100	
G		.050	

operating characteristics at 25°C free-air temperature

PARAMETER		TEST CONDITIONS	2N4996 TYP	UNIT
NF	Spot Noise Figure	$V_{CE} = 10$ V, $I_C = 2$ mA, $R_G = 100\ \Omega$, $f = 100$ MHz	2.5	dB